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NATURAL RESOURCES DEFENSE COUNCIL

August 24, 2012

EPA Science Advisory Board
c/o Dr. Angela Nugent
Designated Federal Officer

Re: Comments of the Natural Resources Defense Council on the Science Advisory Board Review (7-26-12 Draft) of EPA's Accounting Framework for Biogenic CO2 Emissions from Stationary Sources (September 2011)

Dear EPA Science Advisory Board:

The Natural Resources Defense Council (NRDC) wishes to thank the Biogenic Carbon Emissions Panel for its work to evaluate and improve EPA's *Accounting Framework for Biogenic CO_2 Emissions from Stationary Sources.* In that effort, we especially commend the members of the panel for grappling with the foundational scientific components of an accounting framework that can assess what the atmosphere "sees" in terms of carbon emissions when a facility burns biomass instead of fossil fuels for energy production.

NRDC applauds the conclusion by the panel majority (reflecting the views of all but one member) that all biomass cannot be assumed *a priori* to be carbon neutral. Further, we commend the majority report's vigorous critique of the "regional approach" to carbon accounting reflected in EPA's Draft Biogenic Carbon Accounting Framework. We support the report's assessment that such an approach is scientifically unjustified and fails to capture the causal connection between biomass harvesting and atmospheric carbon impacts. We agree with the panel's view that this approach is likely to create perverse incentives for both land-owners and investors, encouraging the use of biomass with a carbon emissions profile that compares unfavorably to fossil fuels, and discouraging the use of biomass with a favorable profile.

We likewise commend the majority report's discussion of the heterogeneity of biomass types and production methods, which we agree result in considerably different net carbon emissions when different categories of biomass are used in bioenergy production. The framework EPA puts into place to account for biogenic carbon emissions from large stationary sources must reflect this heterogeneity in order to accurately reflect the carbon emissions consequences of biomass feedstock choices, and to guide the marketplace towards low-carbon sources and away from high-carbon sources. We therefore support the majority report's conclusion that neither a categorical inclusion nor exclusion of biogenic carbon emissions is appropriate in any accounting framework for biogenic carbon emissions used for regulatory purposes under the Clean Air Act.

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We support the panel's recommendation to disaggregate biomass into categories based on carbon turnover rates. For long-recovery feedstocks, such as whole trees, we strongly commend the majority report's rejection of the fixed point baseline used in EPA's draft framework and its thoughtful explanation of the need to model an "anticipated future" baseline to determine what would have happened in the absence of bioenergy production and compare it with the carbon trajectory associated with harvesting biomass for bioenergy in order to capture only additional carbon sequestration. While we acknowledge that modeling of this kind carries uncertainties, we agree that it is the only means by which to gauge the incremental carbon emissions impact of woody biomass harvesting.

NRDC believes the new biomass regulations in the state of Massachusetts offer a blueprint for EPA as it moves forward in this effort. The new final rules recently released by the Commonwealth establish nation-leading standards for biomass, and include a robust carbon accounting framework. Most importantly, the Massachusetts framework draws a critical distinction between harvest byproducts – i.e., "residues" – on the one hand, and thinned whole trees, on the other – which is an *essential* piece of any greenhouse gas (GHG) accounting framework.

Under the accounting framework, residues and whole trees have substantially different "carbon deficit functions" — a measure of their carbon emissions impacts. The Massachusetts Department of Energy Resources provides these representative temporal functions as part of the input spreadsheet for applicants—where the carbon impacts of residues and whole-tree thinnings are evaluated. The regulations base these functions on the average of results presented in the Manomet Center for Conservation Sciences study on the total forest stand carbon and on other literature on decay rates.

While the framework and its underlying carbon deficit functions cannot be expected to perfectly capture the exact carbon profile of every material used as biomass fuel, the regulations strike a practical balance that captures the critical distinctions between residues and whole trees, consistent with the basic findings of the Manomet study and the emerging worldwide body of related carbon accounting science.

The Massachusetts guidance and reporting requirements for GHG accounting and eligible fuel certification are appropriately streamlined and do not represent overly cumbersome documentation for parties seeking financial incentives under the Commonwealth's Renewable Portfolio Standard. The information needed to complete the documentation required by the guidance is typically readily available to forest managers as part of traditional timber harvest planning, and similarly available to plant managers and power sector operations. Absent these reporting documents, Massachusetts would simply be unable to verify progress under the regulations.

Finally, while we view the final report's discussion of time scales as more balanced than in previous drafts, we continue to believe that the science panel has overlooked one crucial factor in the use of biomass with very long regrowth cycles: Even if near-term carbon emissions increases are eventually "made up" by regrowth over the very long term, the carbon emissions from these types of biomass actually exceed those from fossil fuels for decades. This puts use of these types of biomass fuels in conflict with the urgent need for near-term carbon emission reductions. The time profile of the carbon emissions from biogenic fuel sources

matters because it is critical to limit near-term global greenhouse gas emissions. Emissions must be stabilized within the next few decades in order to limit expected global warming to 2 degrees Celsius. Beyond that, we risk crossing climate "tipping points", at which point scientists increasingly believe that dangerous impacts may become inevitable. The regulations EPA adopts need to be consistent with this reality and we urge EPA to insist on the necessity for rapid and substantial emissions reductions when promulgating its final biogenic carbon accounting regulations.

Sincerely,

Nathanael Greene
Director of Renewable Energy Policy